Q-1 ) What is Cloud Computing. Explain with at least with 5 lines?

Cloud computing aims to deliver computing services, including storage, processing power, and applications, over the internet. Instead of relying on local servers or personal devices to handle data and applications, users can access and use resources hosted on remote servers provided by cloud service providers. This model offers scalability, flexibility, and cost efficiency, allowing businesses and individuals to pay for only the resources they consume.

Q-2 ) What is AWS? Explain in at least 5 lines.

Amazon Web Services (AWS) is a comprehensive cloud computing platform offered by Amazon. It provides a vast array of services, including computing power, storage, databases, machine learning, analytics, and more. AWS allows businesses and individuals to access and utilize these services. As a leader in the cloud industry, AWS is known for its reliability, scalability, and flexibility, making it a popular choice for organizations looking to deploy and manage applications and services in the cloud.

Q-3 ) What is the objective of IAM?

The primary objective of Identity and Access Management (IAM) is to ensure secure and controlled access to digital resources within a system or organization. IAM achieves this by effectively managing user identities, defining and enforcing access policies, and regulating permissions based on roles and responsibilities.

Q-4 ) What do you mean by EC2? Write at least 5 lines.

Amazon Elastic Compute Cloud (EC2) is a central component of Amazon Web Services (AWS), providing resizable compute capacity in the cloud. EC2 allows users to run virtual servers, known as instances, to host applications and services. Users can choose from a variety of instance types based on their computing needs, such as general-purpose, memory-optimized, or GPU instances. It is a fundamental building block for deploying and managing applications in the AWS cloud, providing flexibility, reliability, and cost-effectiveness.

Q-5 ) How to deploy Spring Boot project in AWS Cloud? Write all steps with all the commands.

Login in to my AWS server using macos terminal 🡪 ssh -i "/Users/wenlongy/ec2keypair.pem" [ec2-user@18.223.107.122](mailto:ec2-user@18.223.107.122)

Install the java environment 🡪 sudo yum install java-17

Upload my spring boot project onto the server 🡪 scp -i "/Users/wenlongy/ec2keypair.pem" /Users/wenlongy/Desktop/AWS-backend-0.0.1-SNAPSHOT.jar ec2-user@13.59.163.31:/home/ec2-user/

Run the sping boot application 🡪 java -jar springboot-backend-0.0.1-SNAPSHOT.jar

Q-6 ) How to connect with EC2 instance?

1. **Navigate to the Directory with Your Key Pair in macOS terminal**
2. **Change Key Pair Permissions 🡪** chmod 400 your-key-pair.pem
3. **Connect to the EC2 Instance 🡪** ssh -i "your-key-pair.pem" ec2-user@your-instance-ip
4. **Terminate the Connection 🡪** exit

Q-7 ) What is EBS Volume?

Amazon Elastic Block Store (EBS) provides block-level storage volumes for use with Amazon EC2 instances. These EBS volumes offer persistent and high-performance storage that can be attached to EC2 instances.

Q- 8 ) What is RDS?

Amazon RDS (Relational Database Service) is a fully managed relational database service provided by Amazon Web Services (AWS). It simplifies the process of setting up, operating, and scaling relational databases, allowing users to focus on their applications instead of the administrative tasks associated with database management.

Q-9 ) What is S3?

Amazon S3 (Simple Storage Service) is a highly scalable and durable cloud storage service provided by Amazon Web Services (AWS). It is designed to store and retrieve any amount of data from anywhere on the web.

Q-10 ) What is REST API?

REST (Representational State Transfer) API, or simply RESTful API, is an architectural style for designing networked applications. It is commonly used in web services development to enable communication between systems over the internet. REST is based on a set of principles that prioritize simplicity, scalability, and statelessness.